

EDITORIALS.

THE SUBJECT of botanic gardens is happily coming into prominence in the United States. The recent address of Dr. Britton at Buffalo has put into our hands a succinct account of **Botanic Gardens** what has been done abroad and what has been begun in this country. The showing for America is better than was expected, and the promise of the immediate future seems to be very large. The two essential features of a botanic garden, popular education and botanical research, have been lost sight of for the most part in the numerous so-called gardens of many cities. Unless under scientific control they become merely places of cheap display, pleasant enough but not specially instructive, and certainly offering no facilities for research. Probably the only possible condition in which a botanic garden can be made to fulfill its real mission is to develop it in connection with a university, but if left to the university alone it will seldom command sufficient income to become largely effective. If a combination can be made between a university and a city, as in the case of the New York Botanical Garden, the largest results are possible. The growing demands of botanical science have brought every university face to face with the problem of a botanic garden, and it seems likely that the solution of this problem in America lies in the combination of university and municipality.

THIS COMBINATION may not be so difficult as some suppose. Almost every municipality has one or more parks in various stages of cultivation. In most cases, if under high cultivation, the same monotonous succession of a few common plants in beds of conventional form appears. It is astonishing to note the limited range of plants ordinarily selected for parks, to the exclusion of the hosts of forms awaiting cultivation and of far more interest even to the park frequenting public. In such a case an arrangement might be made between the park commissioners and the university by which a certain portion of the park area should be under the control of the university as to the plants to be cultivated. The advantage to the commissioners

would be the securing of expert advice in reference to the plants adapted to interest and instruct the public; the advantage to the university would be the securing of abundant illustrative material without the cost of its maintenance. Certainly the parks need to command a certain amount of botanical knowledge, and the universities are equally in need of a larger contact with plants in their various relations.

ASIDE FROM the ordinary uses by the university of what is styled illustrative material, any large control of planting would secure the possibility of experimental work in various biological lines without interfering with the legitimate uses of a park. Problems connected with heredity would be perfectly feasible, such as otherwise would demand the large outlay connected with the equipment of a special experiment station. In case of too great distance between the park and university a small "field laboratory" would make possible such work as would suffer by transportation. It is often said that most of our universities have about them wild areas that are a sufficient botanic garden. This is true in case botanical instruction and research is to go no farther than it has in this country, but it certainly is not true if it is to advance in the directions indicated by the signs of the times. Botanical laboratories, to properly maintain themselves as centers of current instruction and research, are compelled to provide for plants in masses, grouped with a purpose, and subject to control.

THE PUBLICATION of articles upon the same research in different journals under the same or slightly different titles is a growing custom and an evil one. When a subject is a many sided one, **Duplication of Publication** with relations to several branches of science, there is justification for such duplication. The paper in the August number of the GAZETTE, by Kahlenberg and True, for example, is a most suggestive one, not only in chemistry, but also in medicine, bacteriology, and physiology. The editors felt that its botanical bearing was sufficient to justify its publication in the GAZETTE, though it is to appear afterward in full in another form and though a brief abstract of it had already been printed.

BUT WE WERE not aware that Mr. Maxwell's paper upon the growth of banana leaves, which was printed in our June number, was to be republished in the *Botanisches Centralblatt* about July 1, and we doubt

very much whether the editor of that journal knew that it had already been published. Its importance did not justify republication. The paper was received by the GAZETTE through Dr. Goodale, whom the author requested to have it published in an American journal, with no intimation that he was sending another copy elsewhere. This is not the first time that the GAZETTE has been imposed upon in this way, which speaks better for the faith of the editors in botanists than for the good faith of the authors. Certainly common honesty requires that authors give editors an opportunity to refuse papers which they expect to duplicate thus.

IF WE ARE not mistaken, the publication of one paper stating fully the nature and results of a research ought to end publication until further research has been made and new results reached. Some eminent botanists have in late years followed a different course, and have worked over the same studies into three or four different papers in different journals. But if results are of real value one adequate publication is all they need to receive recognition and all that ought to be unloaded upon already burdened bibliographers. We go so far as to say that the "preliminary paper" with its half prepared diagnoses or ill-digested generalizations is an unmixed evil and ought to be suppressed by botanical opinion. We are glad to join *Natural Science* in its vigorous opposition to such makeshift methods.